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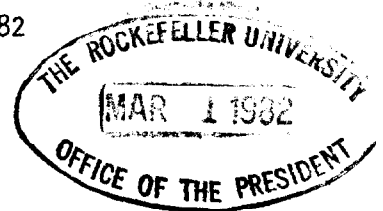
SANTA BARBARA • SANTA CRUZ

LAWRENCE HALL OF SCIENCE
A RESEARCH CENTER IN SCIENCE EDUCATION
(415-642-3679)

BERKELEY, CALIFORNIA 94720

February 24, 1982

L R Kaydes



President Joshua Lederberg
The Rockefeller University
1230 York Avenue
New York, NY 10021

Dear President Lederberg:

A few days ago I received your inquiry about biology instruction. With some embarrassment I confess that I cannot locate the letter at the moment and fear it may have become mixed with some of my papers. I shall answer it as well as I can remember and hope you will repeat any additional questions that I may have overlooked.

I feel very strongly that all instruction should combine instructional input from the teacher with opportunities for autonomous activities by the students. Elaborations of this idea as applied to physics teaching are contained in the enclosed article.

The reason I bring up this point is that most teachers, especially individuals who are very expert in their field, tend to concentrate on the input--what they have to offer the students. They tend to overlook the students' need for autonomy, for pursuing questions or interests arising from within themselves, but inspired by the teacher.

My second point would be to look for an instructor who is an expert in his field and who is at least as bright as the students. He or she should be genuinely interested in the development of the students, more so than in displaying his or her ability and knowledge.

Third, I would look for a set of related topics in which the students, at whatever level they may be, could engage in some independent study or investigation even though they have very limited specialized knowledge. Some instructors have chosen readings from original source materials in the history of their science. Others have used more of a laboratory orientation, with either the students' homes or a scientific laboratory serving as the setting for investigations.

Your letter distinguished between two groups of students, I believe--those who are genuinely interested in their studies of biology and others who are required to study the field, but do not have a genuine interest. It is clearly much more difficult to work with the latter group of students, and it is here that a gifted instructor can be particularly effective.

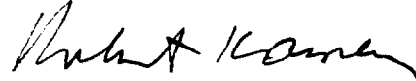
President Joshua Lederberg

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February 24, 1982

Again, my apologies for misplacing your letter. Please let me know in what other ways I can be of assistance.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "Robert Karplus". The signature is fluid and cursive, with the first name "Robert" and last name "Karplus" clearly distinguishable.

Robert Karplus
Associate Director

RK:sa